

In re: Jae-Hyun Park et al.  
Serial No.: 10/689,426  
Filed: October 20, 2003  
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### REMARKS

Applicants appreciate the thorough examination of the present application as evidenced by the June 17, 2005 Office Action ("Office Action"). Applicants also appreciate the Examiner's indication that Claims 5, 25 and 27 would be allowable if rewritten in independent form. These claims have been rewritten in independent form as will be described in detail below. However, Applicants also respectfully submit that the remaining claims are patentable for the reasons that will be described in detail below.

#### Claims 5, 25 and 27 Are In Condition For Allowance

Claims 5, 25 and 27 were indicated as being allowable if written in independent form. These claims have been rewritten in independent form as follows: Claim 5 has been amended to incorporate therein the recitations of Claim 1; and Claims 25 and 27 have been amended to incorporate the recitations of base Claim 22. Therefore, Applicants submit that Claims 5, 25 and 27 are in condition for allowance. Dependent Claims 6-7 depend from Claim 5 and also are in condition for allowance at least as depending from Claim 5.

#### Claims 16-21 ("Species II") Are In Condition for Allowance

Applicants respectfully submit that Claims 16-21 should not be withdrawn from consideration as being directed to a non-elected *invention* as stated in the Election/Restrictions section of the Detailed Action. Office Action, p. 2. Claims 22-29 were not claims for a different *invention*. Rather, Claims 22-29 were directed to a patentably distinct *species*. Moreover, Claims 22-29 are claims *generic* to both Claims 1-15 ("Species I") and Claims 16-21 ("Species II"). In Applicants' April 12, 2005 Response to the Restriction Requirement, Applicants provisionally elected Species I, corresponding to Claims 1-15 and generic Claims 22-29, with traverse. Allowable Claims 25 and 27 are generic to Species II Claims 22-29. The Species II claims should be rejoined. Accordingly, Applicants request examination and allowance of all pending claims including Species II, Claims 16-21.

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**Claims 1-4, 6-12, 14, 15, 22, 23, 26, 28 and 29 Are Patentable Over Nishimura**

Claims 1-4, 6-12, 14, 15, 22, 23, 26, 28 and 29 stand rejected under 35 U.S.C. § 102 as anticipated by United States Patent Application Publication No. 2002/0036917 to Nishimura et al. ("Nishimura"). Office Action, p. 3. However, Applicants respectfully submit that these claims are patentable over Nishimura et al. for the following reasons.

Both independent Claims 1 and 10 recite that the magnetic resistor overlaps with "the first and second sub-digit lines". Applicants respectfully submit that Nishimura does not describe a magnetic resistor overlapping *both* the first and second sub-digit lines because Figs. 1 and 2 of Nishimura show the magnetic resistor overlapping only *one* digit line and Fig. 39 of Nishimura shows *no* overlapping of the magnetic resistor with the first and second sub-digit lines. Both Claims 1 and 10 recite the magnetic resistor overlapping the first and second sub-digit lines, and Fig. 9 of the Application illustrates an exemplary embodiment of overlapping the magnetic resistor with the first and second sub-digit lines. Furthermore, by overlapping the first and second digit lines, it is possible to realize relatively uniform magnetic fields throughout the MTJ while allowing increased integration densities of the MRAM devices, as noted in the Detailed Description of the Application on p. 16, lines 4-6. The table on p. 15 and the graph in Fig. 11 of the Application demonstrate that relatively uniform magnetic fields may be achieved in the MTJ by overlapping the first and second sub-digit lines with the magnetic resistor. Thus, Applicant respectfully submits that Claims 1 and 10 are neither anticipated by, nor obvious in view of, Nishimura.

Independent Claim 22 has been amended to also recite "wherein the magnetic resistor overlaps the first and second digit lines", and is therefore patentable for at least the reasons that were described above in connection with Claims 1 and 10.

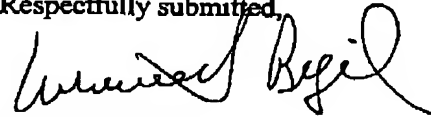
Dependent Claims 2-4, 8-9, 11-15, 23-24, 26 and 28-29 are patentable at least by virtue of the patentability of the independent claims from which they depend. Moreover, many of these dependent claims are independently patentable. However, in view of the clear patentability of the independent claims, the independent patentability of the dependent claims will not be discussed for the sake of brevity.

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**Conclusions**

Applicants again appreciate the Examiner's indication that Claims 5, 25 and 27 are in condition for allowance. In view of the above remarks, however, all of the pending Claims 1-29 now are in condition for allowance, including non-elected species Claims 16-21. Accordingly, Applicants respectfully request withdrawal of the outstanding rejections and allowance of the present application.

Respectfully submitted,

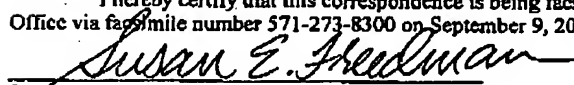


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